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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/520,093	01/04/2005	Peter Pleyer	C&P-0002	6990

7590 12/29/2006
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30 Valley Stream Parkway
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EXAMINER

NOVOSAD, CHRISTOPHER J

ART UNIT	PAPER NUMBER
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3641

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	12/29/2006	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/520,093

Applicant(s)

PLEYER, PETER

Examiner

Christopher J. Novosad

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 January 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-59 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-59 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>090205</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-59 are rejected under 35 USC 112, second paragraph, as being indefinite for failing to particularly point and distinctly claim the subject matter which applicant regards as the invention.

In independent parent claims 1, 3, 7, 13, 17, 24 and 28, the recitation in the preamble of each of these claims of "A volumetric metering device for the metered delivery of granular and powdery materials, *particularly for machines for distributing such materials*" (emphasis added) is a recitation of differing scope of intended use, and therefore renders these claims indefinite. Dependent claims 2, 4-6, 8-12, 14-23, 25-27 and 29-59 are indefinite for the same reason as their respective parent claims.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section of this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-4, 7-11, 34-36, 40 and 44 are rejected under 35 U.S.C. 102(b) as being anticipated by Gregor (U.S.P. 5,826,523).

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Regarding claim 1, Gregor (Figs. 5-8 and 10, col. 3, line 61 to col. 5, line 43) discloses a volumetric metering device (30) for the metered delivery of granular and powdery materials (seed, fertilizer, or both, col. 1, lines 16-22), particularly for machines for distributing such materials, comprising:

a housing (60) *formed in a single piece* (Figs. 6, 7) and a metering member (30, 145) supported rotatably in the housing (60).

Regarding claim 2, the components of the metering system (30) including the housing (60) of Gregor (col. 6, lines 19-25) are "moulded of plastics material," as broadly called for in the claim.

With respect to claim 3, Gregor discloses:

a housing (60) having juxtaposed openings (Fig. 6, note the openings, unnumbered, to meter chamber 100 which are closed by end plates or flanges 95, 100) each with a dimension; and

a metering member (metering cartridge 70) having at least one metering wheel (145) clamped between a pair of flanges (end plates 95, 100 as well as bearing plates 300), the dimension of at least one of the juxtaposed openings (as noted above) of the housing (60) allowing the metering member (70, 145), complete with the at least one metering wheel (145) and the flanges (end plates 95, 100 as well as bearing plates 300), to pass from and towards the housing (60), at least one of the flanges (95, 100) being arranged to close the respective opening (as noted previously) when the metering member (70, 145) is fitted in the operative position in the housing (60), and providing rotatable support (Figs. 6-8, col. 4, lines 15-16) of the metering member (145) in the housing (60).

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As to claim 4, Gregor, *in addition* to the device of claim 3, above, discloses that *both* of the openings (as noted above) have dimensions to allow the metering *wheel* (145) and the flanges (end plates 95, 100 as well as bearing plates 300), to pass from and towards the housing, *both* of the flanges (95, 100) being arranged to close the *respective openings* (as noted previously) when the metering member (145) is fitted in the operative position in the housing (60), and providing rotatable support (Figs. 6-8, col. 4, lines 15-16) of the metering member (145) in the housing (60).

With regard to claim 7, Gregor discloses a *plurality* of metering wheels (70, 145, Figs. 5-7 and 8) which are structurally independent of one another and are interposed in a group (70, Fig. 6) between a pair of flanges (95, 100), and a shaft (150, Fig. 5) acting as a tie between the flanges (95, 100), in order to clamp in a group the flanges and the metering wheels (145) interposed between them, to constitute a unit (70, Fig. 6) which can be handled individually.

As to claim 8, note in Gregor that the shaft (150) comprises, at one of its ends a joint for connection to a drive shaft (col. 4, line 61 to col. 5, line 4, Fig. 8, at 241, 245, 246).

Regarding claim 9, Gregor (Figs. 5, 6 and 8) shows means for clamping the group of flanges (95, 100) and wheels (145) at the end remote from the joint (241, 245, 246), wherein the joint acts as an abutment shoulder for the clamping.

With respect to claims 10 and 11, Gregor (Figs. 5 and 7) shows the shaft (150) to have a polygonal cross-section, and the metering wheels (145) to have a central portion or hub (unnumbered) with a hole of polygonal cross-section configured to be coupled with the polygonal cross-section of the shaft (150).

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As to claims 34 and 35 Gregor (col. 11, lines 42-56) teaches the interchanging of metering wheels of different dimensions, as called for in the claim.

With regard to claims 36, 40 and 44, Gregor teaches that housing (60) has an input (product entrance slot 80, Figs. 6 and 7) and an output opening (outlet 180), and first flow separator means (col. 7, lines 25-31 to col. 11, line 57) disposed in the region of the output opening in the housing(60).

Claims 1, 3, and 4 are further rejected under 35 U.S.C. 102(b) as being anticipated by either of Jackson (U.S.P. 4,692,727) or Wilson (U.S.P. 5,002,084).

Regarding claim 1, Jackson discloses a volumetric metering device for the metered delivery of granular and powdery materials, particularly for machines for distributing such materials, comprising:

a housing (18) *formed in a single piece* (see Figs. 1-3) and a metering member (26, 34, 32) supported rotatably in the housing (18).

With respect to claim 3, Jackson discloses:

a housing (18) having juxtaposed openings (front and rear apertures, unnumbered, which are closed by front flange (28) and rear flange (62, 82, see Figs. 2 and 3) each with a dimension; and

a metering member (26, 34) having at least one metering wheel (rotor 26, with blades 34) clamped between a pair of flanges (28, 62), the dimension of at least one of the juxtaposed openings (as noted above) of the housing (18) allowing the metering member (26, 34), complete with the at least one metering wheel (26, 34) and the flanges (as noted above), to pass from and towards the housing (18), at least one of the flanges (28, 62) being arranged to close the

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respective opening (as noted previously) when the metering member (26, 34) is fitted in the operative position in the housing (18), and providing rotatable support (col. 3, lines 25-63, Figs. 3, 3a) of the metering member (26, 34) in the housing (18).

As to claim 4, Jackson, *in addition* to the device of claim 3, above, discloses that *both* of the openings (as noted above) have dimensions to allow the metering *wheel* (26, 34) and the flanges (28, 62), to pass from and towards the housing, *both* of the flanges flanges (28, 62) being arranged to close the *respective openings* (as noted previously) when the metering member (26, 34) is fitted in the operative position in the housing (18), and providing rotatable support (as noted above) of the metering member (26, 34) in the housing (18).

Wilson further fully meets claims 1, 3 and 4 (see Figs. 2-4 as well as the prior art therein of Fig. 1). Wilson discloses rotary dispensing valve comprising a housing (104) formed of a single piece, juxtaposed openings (unnumbered) of the housing (104) closed by flanges or end plates (110, 130, Fig. 2), a metering member (metering wheel or rotor 102 with radial vanes 140) which is rotatably supported (Fig. 2) in the housing (18).

Claims 13 and 14 are rejected under 35 U.S.C. 102(b) as being anticipated by European Patent 0358878.

With respect to claim 13, EP 0358878 (Figs. 2-5, col. 7, line 56 to col. 8, line 5) discloses a volumetric metering device for the metered delivery of granular and powdery materials comprising a metering member (unnumbered) carrying a plurality of metering wheels (1a, 1b, 6) having blades (1a, 1b), and clamped together in a group (Figs. 2-5), the blades (1a, 1b) having appendages (Figs. 3-5, at 24, 25) restraining the blades (1a) of one wheel (1a, 6) on the blades (1b) of the adjacent wheel (1b, 6).

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Regarding claim 14, EP 0358878 (Figs. 3-5), in *addition* to the elements recited in claim 13 noted above, further discloses a disc (13 in Figs. 2-5) having holes (unnumbered) for the appendages (24, 25), the disc (13) being interposed between adjacent metering wheels (1a, 1b, 6) and constituting an interconnection element (13, 24, 25) between the blades (1a, 1b) of adjacent wheels.

Claim 17 is rejected under 35 U.S.C. 102(b) as being anticipated by Lafferty (U.S.P.5,003,894).

Lafferty (Figs. 1 and 2, col. 4, line 20 to col. 6, line 58) discloses a volumetric metering device for the metered delivery of granular and powdery materials and the dispensing thereof, comprising:

a metering member (12) having metering wheels (12) clamped in a group (Fig. 2) and keyed to a common drive-transmission shaft (11) and selective drive-transmission means (clutch means 13-16, 5) interposed between the wheels (12) and the shaft (11) in order to exclude the wheels from driving by the shaft, or conversely, to connect the wheels for driving the shaft.

Claim 28 is rejected under 35 U.S.C. 102(b) as being anticipated by European Patent 0259633.

EP '633 (Figures 2, 3 and 5) discloses a volumetric metering device having a housing (7), a metering member (1) and a feeler device (11) mounted in the housing (7) and active as a scraper blade with a lip (angled end of the feeler 11) thereof operative on the metering member (1), and means (nut and bolt means 16) for altering locally the angle of introduction between the feeler device (11) and the metering member (1), the means being associated with the feeler device (11), immediately upstream of the operative lip (as noted above).

Claim Rejections – 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 2 is further rejected under 35 U.S.C. 103(a) as being unpatentable over either of Jackson or Wilson, each as applied above, taken alone, or in view of Gregor.

Because molded plastics are noted for their well-known beneficial properties, e.g. relative lightness of weight, relatively high strength, resistance to corrosion, a low coefficient of friction, and good wear characteristics, to form a housing, as well as other components, of a rotary feeder system for dispensing agricultural particulates and powdery materials, e.g. seed and/or fertilizer, from a molded plastic material, apart from being notoriously conventional in the art, would merely represent an obvious engineering design choice to one of ordinary skill in the art.

Therefore, in view of the above-noted, well-known beneficial qualities of molded plastics, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have utilized molded plastic material for forming the housing of the rotary feeder system of either Jackson or Wilson.

In any event, the Gregor reference (col. 5, lines 19-25) clearly teaches the use of using molded plastic material to form the components, including the housing, of a rotary seed metering system because such plastic materials desirably exhibit “a low coefficient of friction and good wear characteristics.”

It would therefore have been obvious to one of ordinary skill in the art at the time the invention was made to have utilized a molded plastic material to form the housings of the rotary feeder systems of either Jackson or Wilson for the purpose of providing said housings with a low coefficient of friction and good wear characteristics, as well as relatively high strength, lightness of weight and resistance to corrosion.

Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over European Patent 0358878, as applied above to parent claim 13, in view of Gregor.

European Patent 0358878, however, does not disclose the claimed feature wherein the metering wheels can be interchanged or replaced with wheels of different dimensions.

Gregor (col. 11, lines 42-56), however, teaches that metering wheels can be interchanged with wheels of different dimensions (having larger or smaller product valleys 280) for the purpose of allowing the metering of particulate materials of a desired particulate size, e.g. when the product to be metered is replaced with a product having a larger or smaller grain size.

It would therefore have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the volumetric metering device of EP 0358878 so that the metering wheels thereof (1a, 1b) could be interchanged or replaced with wheels of different dimensions, as clearly taught in Gregor, for the purpose of allowing the metering of particulate materials of a desired particulate size, e.g. when the product to be metered is replaced with a product having a larger or smaller grain size.

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Allowable Subject Matter

Claims 24-27 and 56-59 would be allowable if rewritten to overcome the rejection under 35 U.S.C. 112, second paragraph, set forth in this Office action.

Dependent claims 5, 6, 12, 15, 18-23, 29-33, 37-39, 41-43, 45-55 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims, and if rewritten to overcome the rejection under 35 U.S.C. 112, second paragraph, set forth in this Office action..

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher J. Novosad whose telephone number is 571-272-6993. The examiner can normally be reached on Monday-Thursday 5:30am-4:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Carone can be reached at 571-272-6873. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Christopher J. Novosad
Primary Examiner
Art Unit 3641

December 22, 2006